

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Ballinger et al.

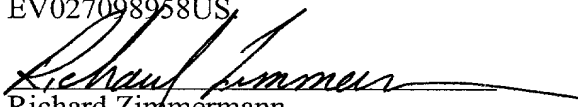
Serial No. R. 53 (b) Divisional of
U.S.S.N. 09/370,398

Filed: Herewith

For: Growth Factor Antagonist
Materials and Methods

Group Art Unit: To be assigned

Examiner: To be assigned

) I hereby certify that this paper and the
) documents referred to as enclosed therewith
) are being deposited with the United States
) Postal Service on **February 26, 2002**, in an
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) 
) Richard Zimmermann

PRELIMINARY AMENDMENT

Box Patent Application
 Commissioner for Patents
 Washington, DC 20231

Sir:

Prior to calculating the filing fee and substantive examination, please amend
 the application filed herewith as follows.

AMENDMENT

IN THE SPECIFICATION

Please replace the paragraph beginning at page 1, line 5 with the following rewritten
 paragraph.

The present application is a divisional of United States Application No. 09/370,398
 filed August 6, 1999. The present invention relates to a novel polynucleotide encoding a
 protein called FGFAn-Hy, which is structurally related to a growth factor antagonist protein,
 Sprouty, along with therapeutic, diagnostic and research utilities for these and related
 products.

Please replace the paragraph beginning at page 29, line 17 with the following rewritten paragraph.

The protein may also be produced by operably linking the isolated polynucleotide of the invention to suitable control sequences in one or more insect expression vectors, and employing an insect expression system. Materials and methods for baculovirus/insect cell expression systems are commercially available in kit form from, e.g., Invitrogen, San Diego, Calif., U.S.A. (the MAXBAT™ kit), and such methods are well known in the art, as described in Summers and Smith, Texas Agricultural Experiment Station Bulletin No. 1555 (1987), incorporated herein by reference. As used herein, an insect cell capable of expressing a polynucleotide of the present invention is "transformed."

Please replace the paragraph beginning at page 29 line 25 with the following rewritten paragraph.

The protein of the invention may be prepared by culturing transformed host cells under culture conditions suitable to express the recombinant protein. The resulting expressed protein may then be purified from such culture (i.e., from culture medium or cell extracts) using known purification processes, such as gel filtration and ion exchange chromatography. The purification of the protein may also include an affinity column containing agents which will bind to the protein; one or more column steps over such affinity resins as concanavalin A-agarose, HEPARIN-TOYOPEARL™, or CIBACROM BLUE 3GA SEPHAROSE™; one or more steps involving hydrophobic interaction chromatography using such resins as phenyl ether, butyl ether, or propyl ether; or immunoaffinity chromatography.

IN THE ABSTRACT

Please replace the Abstract as originally filed with the following Abstract:

The present invention provides nucleic acids encoding Sprouty related human growth factor antagonist proteins (designated FGFAn-Hy), the polypeptides encoded by these nucleic acids and uses of these and related products.

IN THE CLAIMS

Please cancel claims 1-21 without prejudice to the Applicants' right to pursue claims of the same or similar scope in a duly filed continuing application. Please add new claims 22-23 as follows.

22. An isolated polynucleotide comprising the nucleotide sequence of SEQ ID NO: 1.
23. An isolated polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 2.

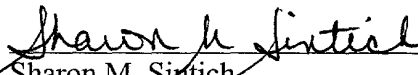
REMARKS

By the forgoing, the Applicants have amended the specification to include an updated claim of priority and to correct typographical errors. The abstract has been amended to more sufficiently describe the claimed invention. Support for new claims 22-23 is found throughout the specification and in the claims of the parent application, as originally filed. The Applicants do not intend by these or any other amendments to abandon the subject matter of any claim as originally filed, and reserve the right to pursue such subject matter in this application or related applications, including but not limited to parent applications and continuing applications.

Respectfully submitted,

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By:


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Registration No. 48,484

February 26, 2002

APPENDIX A
MARKED UP VERSION OF THE AMENDMENTS TO THE
SPECIFICATION AND ABSTRACT

IN THE SPECIFICATION

At page 1, line 5:

The present application is a divisional of United States Application No. 09/370,398 filed August 6, 1999. The present invention relates to a novel polynucleotide encoding a protein called FGFA_n-Hy, which is structurally related to a growth factor antagonist protein, Sprouty, along with therapeutic, diagnostic and research utilities for these and related products.

At page 29 line 17:

The protein may also be produced by operably linking the isolated polynucleotide of the invention to suitable control sequences in one or more insect expression vectors, and employing an insect expression system. Materials and methods for baculovirus/insect cell expression systems are commercially available in kit form from, e.g., Invitrogen, San Diego, Calif., U.S.A. (the [MaxBat.RTM] MAXBAT™ kit), and such methods are well known in the art, as described in Summers and Smith, Texas Agricultural Experiment Station Bulletin No. 1555 (1987), incorporated herein by reference. As used herein, an insect cell capable of expressing a polynucleotide of the present invention is "transformed."

At page 29, line 25:

The protein of the invention may be prepared by culturing transformed host cells under culture conditions suitable to express the recombinant protein. The resulting expressed protein may then be purified from such culture (i.e., from culture medium or cell extracts) using known purification processes, such as gel filtration and ion exchange chromatography. The purification of the protein may also include an affinity column containing agents which will bind to the protein; one or more column steps over such affinity resins as concanavalin A-agarose, [heparin-toyopearl.RTM] HEPARIN-TOYOPEARL™ or [Cibacrom blue 3GA Sepharose.RTM.] CIBACROM 3GA SEPHAROSE™; one or more

steps involving hydrophobic interaction chromatography using such resins as phenyl ether, butyl ether, or propyl ether; or immunoaffinity chromatography.

IN THE ABSTRACT

The present invention provides [novel] nucleic acids encoding Sprouty related human growth factor antagonist proteins (designated FGFAn-Hy), the [novel] polypeptides encoded by these nucleic acids and uses of these and related products.